ABSTRACT

A security element (2) which is difficult to copy includes a layer composite (1) which has microscopically fine, optically effective structures (9) of a surface pattern, which are embedded between two layers (5; 6) of the layer composite (1). In a plane of the surface pattern, which is defined by co-ordinate axes x and y, the optically effective structures (9) are shaped into an interface (8) between the layers (5; 6) in surface portions of a holographically non-copyable security feature. In at least one surface portion the optically effective structure (9) is a diffraction structure (S, S*, S**) formed by additive superimposition of a macroscopic superimposition function (M) with a microscopically fine relief profile (R). Both the relief profile (R), the superimposition function (M) and also the diffraction structure (S, S*; S**) are functions of the co-ordinates x and y. The relief profile (R) is a light-diffractive or light-scattering optically effective structure (9) and, following the superimposition function (M), retains the predetermined profile height. The superimposition function (M) is at least portion-wise steady and is not a periodic triangular or rectangular function. In comparison with the relief profile (R) the superimposition function (M) changes slowly. Upon tilting and rotation of the layer composite (1) the observer sees on the illuminated surface portions light, continuously moving strips which are dependent on the viewing direction.

(Figure 1)